[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 29

[Docket No. FAA-2021-0241; Special Conditions No. 29-053-SC]

Special Conditions: Airbus Helicopters Model H160B Helicopter; Use of 30-Minute All Engines Operating Power Rating

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the Airbus Helicopters (Airbus) Model H160B helicopter. This model helicopter will have a novel or unusual design feature associated with a 30-minute all engines operating (AEO) power rating. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: *Effective date*: The effective date of these special conditions is [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Comment due date: The FAA must receive your comments by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Send comments identified by docket number FAA-2021-0241 using any of the following methods:

- Federal eRegulations Portal: Go to http://www.regulations.gov and follow the online instructions for sending your comments electronically.

- Mail: Send comments to Docket Operations, M-30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE, Room W12-140, West Building Ground Floor, Washington, DC 20590-0001.
- Hand Delivery of Courier: Take comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m., and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: Fax comments to Docket Operations at 202-493-2251.

Privacy: Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 1.35, the FAA will post all comments it receives, without change, to http://regulations.gov, including any personal information the commenter provides. Using the search function of the docket website, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the *Federal Register* published on April 11, 2000 (65 FR 19477-19478), as well as at http://DocketsInfo.dot.gov.

Confidential Business Information: CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to these special conditions contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to these special conditions, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN". The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of these special conditions. Submissions containing CBI should be sent to Rao Edupuganti, Dynamic System Section, AIR-627, Technical Innovation Policy Branch, Policy and Innovation Division, Aircraft Certification Service, 10101 Hillwood Parkway, Fort Worth, TX,

76177; telephone (817) 222-5110; email Rao.Edupuganti@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Docket: Background documents or comments received may be read at http://www.regulations.gov at any time. Follow the online instructions for accessing the docket, or go to the Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m., and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Rao Edupuganti, Dynamic System Section, AIR-627, Technical Innovation Policy Branch, Policy and Innovation Division, Aircraft Certification Service, 10101 Hillwood Parkway, Fort Worth, TX, 76177; telephone (817) 222-5110; email Rao.Edupuganti@faa.gov.

SUPPLEMENTARY INFORMATION:

Reason for No Prior Notice and Comment Before Adoption

The FAA has determined, in accordance with 5 U.S.C. 553(b)(3)(B) and 553(d)(3), that notice and opportunity for prior public comment hereon are unnecessary because substantially identical special conditions have been previously subject to the public comment process in several prior instances, such that the FAA is satisfied that new comments are unlikely. For the same reason, the FAA finds that good cause exists for adopting these special conditions upon issuance. The FAA is requesting comments to allow interested persons to submit views that may not have been submitted in response to the prior opportunities for comment.

Special Conditions Number	Company and Helicopter Model
No. 29-049-SC[1]	Leonardo S.p.A., Model AW169

[1] 85 FR 34493, June 5, 2020

No. 29-037-SC[2]	Airbus Helicopters Deutschland GmbH Model MBB-BK117 D-2
No. 29-034-SC[3]	AgustaWestland Model AW189
No. 29-011-SC[4]	Sikorsky Aircraft Corporation Model S-92A
No. 29-004-SC[5]	Sikorsky Model S76C

Comments Invited

While the FAA did not precede these special conditions with a notice of proposed special conditions, the FAA invites you to send any written relevant data, views, or arguments about this final special condition. Send your comments to an address listed under **ADDRESSES**. Include "Docket No. FAA-2021-0241; Special Conditions No. 29-053-SC" at the beginning of your comments. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data.

The FAA will consider all comments received by the closing date for comments. The FAA may change these special conditions based on the comments received.

Background

On November 7, 2014, Airbus applied for FAA type certification validation of the Model H160B helicopter. Airbus applied for an extension on November 1, 2016, which is also the date of the updated type certification basis.

The Airbus Model H160B is a 14 CFR part 29 transport category, twin turboshaft engine helicopter. The Airbus Model H160B helicopter has a maximum takeoff weight of 13,436 lbs. It can hold a maximum of 12 passengers and 2 crew on board. The Airbus Model H160B

[2] 79 FR 78694, December 31, 2014
[3] 79 FR 54889, September 15, 2014
[4] 67 FR 65871, October 29, 2002
[5] 63 FR 32972, June 17, 1998

helicopter is a new part 29 helicopter characterized by the integration of composite materials in its airframe construction, five main rotor blades (i.e., blue edge technology), a Fenestron tail rotor, and a Helionix flight deck.

Airbus proposes that the Model H160B helicopter include the use of a novel and unusual design feature, which is a 30-minute AEO power rating. The 30-minute AEO power rating is generally intended to be used for hovering at increased power for search and rescue missions. Title 14 CFR 1.1 defines "rated takeoff power" as limited in use to no more than 5 minutes for takeoff operation. The use of takeoff power for 30 minutes will require special airworthiness standards, known as special conditions, to address the use of this 30-minute AEO rating and its effects on the rotorcraft. These special conditions will add requirements to the existing airworthiness standards in 14 CFR 29.1049 (Hovering cooling test procedures), 29.1305 (Powerplant instruments), and 29.1521 (Powerplant limitations).

Type Certification Basis

Under the provisions of 14 CFR 21.17, Airbus must show that the Model H160B helicopter meets applicable provisions of the regulations as listed below. The Airbus Model H160B type certification basis date is November 1, 2016.

1. 14 CFR part 29, Amendments 29-1 through 29-55, dated January 31, 2012.

2. Equivalent Safety Findings:

(a) Sections 29.1305, 29.1309, 29.1549, Engine Training Mode.

(b) Sections 29.1305, 29.1321(a), 29.135l(d)(l), and 29.1435, Part Time Display of Vehicle Parameters.

(c) Sections 29.1301, 29.1305, 29.1309, 29.1321, 29.1549, Substitution of Power Index Indicator for required powerplant instruments.

(d) Sections 29.l545(b)(4), 29.l549(b), Airspeed and Powerplant indication green marking.

(e) Section 29.1555(c)(l), Usable fuel capacity marking.

(f) Section 29.807(c), Passenger emergency exits - other than side of fuselage.

In addition, the certification basis includes certain equivalent safety findings that are not relevant to these proposed special conditions.

In addition to the applicable airworthiness regulations and special conditions, the Airbus Model H160B helicopter must comply with the noise certification requirements of 14 CFR part 36, and the FAA must issue a finding of regulatory adequacy under section 611 of Public Law 92-574, the "Noise Control Act of 1972."

Regulatory Basis for Special Conditions

The Administrator has determined that the applicable airworthiness regulations (that is, 14 CFR part 29) do not contain adequate or appropriate safety standards for the Airbus Model H160B helicopter because of a novel or unusual design feature. Therefore, special conditions are prescribed under the provisions of § 21.16.

The FAA issues special conditions, as defined in § 11.19, in accordance with § 11.38, and they become part of the type certification basis under § 21.17(a)(2).

Special conditions are initially applicable to the model for which they are issued**.** Should the type certificate for that model be amended later to include any other model that incorporates the same or similar novel or unusual design feature, the special conditions would also apply to the other model under § 21.101.

Novel or Unusual Design Features

The Airbus Model H160B helicopter will incorporate the following novel or unusual design feature:

A 30-minute AEO power rating.

Discussion

The following is a summary of the final special conditions:

(a) In addition to the requirements of § 29.1049, the aircraft cooling effects due to the use of the 30-minute AEO power rating versus the Takeoff (five-minute) rating must be accounted for in the testing.

(b) In addition to the requirements of § 29.1305, since this new 30-minute AEO power rating has a time limit associated with its use, the pilot must have the means to identify:

(1) When the rated engine power level is achieved,

(2) when the event begins,

(3) when the time interval expires, and

(4) when the cumulative time in one flight is reached.

(c) In addition to the requirements of § 29.1521, this new 30-minute AEO power rating must be limited to not more than 30 minutes per use and not more than a 50 minute cumulative time per flight. This new rating will allow the use of power above maximum continuous power (MCP) up to 30 minutes.

(d) Furthermore, the rotorcraft flight manual for the Airbus Model H160B helicopter must include limitations on the use of the 30-minute AEO power rating, which state that continuous use above MCP up to take-off power is limited to 30 minutes.

Applicability

As discussed above, these special conditions are applicable to the Airbus Model H160B helicopter. Should Airbus apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, these special conditions would apply to that model as well.

Conclusion

This action affects only a certain novel or unusual design feature on the Airbus Model H160B helicopter. It is not a rule of general applicability.

List of Subjects in 14 CFR Part 29

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows**:**

Authority: 49 U.S.C. 106(f), 106(g), 40113, 44701-44702, 44704.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for the Airbus Helicopters Model H160B helicopter. Unless stated otherwise, all requirements in §§ 29.1049, 29.1305, and 29.1521 remain unchanged.

1. Section 29.1049, Hovering cooling test procedures. In addition to the requirements of this section, for rotorcraft with a 30-minute all engines operating (AEO) power rating, the hovering cooling provisions at the 30-minute AEO power rating must be shown—

a. At maximum weight or at the greatest weight at which the rotorcraft can hover (if less), at sea level, with the power required to hover but not more than the 30-minute power, in the ground effect in still air, until at least five minutes after the occurrence of the highest temperature recorded, or until the continuous time limit of the 30-minute AEO power rating if the highest temperature recorded is not stabilized before.

b. At maximum weight and at the altitude resulting in zero rate of climb for this configuration, until at least five minutes after the occurrence of the highest temperature recorded, or until the continuous time limit of the 30-minute AEO power rating if the highest temperature recorded is not stabilized before.

2. Section 29.1305 Powerplant instruments, at Amendment 29-40. In addition to the requirements of this section, for rotorcraft with a 30-minute AEO power rating, a means must be provided to alert the pilot when the engine is at the 30-minute power level, when the event begins, when the time interval expires, and when the cumulative time in one flight is reached.

3. Section 29.1521 Powerplant limitations, at Amendment 29-41. In addition to the requirements of this section, the use of the 30-minute AEO power rating must be limited to not

more than 30 minutes per use and not more than a 50 minute cumulative time per flight. The use of the 30-minute power must also be limited by:

a. The maximum rotational speed which may not be greater than--

(1) The maximum value determined by the rotor design; or

(2) The maximum value shown during the type tests;

b. The maximum allowable turbine inlet or turbine outlet gas temperature.

c. The maximum allowable power or torque for each engine, considering the power input limitations of the transmission with all engines operating;

d. The time limit for the use of the power corresponding to the limitations established in this section, sub-paragraphs a. through c. of this section; and

e. The maximum allowable engine and transmission oil temperatures.

Issued in Kansas City, Missouri on April 14, 2021.

Patrick R. Mullen,

Manager, Technical Innovation Policy Branch,

Policy and Innovation Division,

Aircraft Certification Service.

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